

CLAIMS

What is claimed is:

- 1 1. A mobile, uniprocessor computer system comprising:
 - 2 a high-level baseband controller to operate a radio module in accordance
 - 3 with a wireless communication protocol; and
 - 4 a primary host processor coupled to the high-level baseband controller,
 - 5 the processor having a first portion to process real-time events
 - 6 received from the controller and associated with the wireless
 - 7 communication protocol, and having a second portion to process non
 - 8 real-time events.
- 1 2. The computer system of claim 1, wherein the first portion of the processor
 - 2 includes a non-symmetric processing core to run a first operating system, the
 - 3 second portion of the processor to run a second operating system, and the
 - 4 first and second portions of the processor to share a level-2 cache.
- 1 3. The computer system of claim 1, wherein the first portion of the processor
 - 2 includes a real-time event circuit to halt a non real-time process and to initiate
 - 3 execution of a real-time event handler.
- 1 4. The computer system of claim 3, wherein the first portion of the processor
 - 2 further includes a timer to trigger the real-time event circuit to initiate the
 - 3 execution of the real-time event handler.

1 5. The computer system of claim 3, wherein the processor includes an
2 externally accessible event pin to trigger the real-time event circuit to initiate
3 the execution of the real-time event handler.

1 6. The computer system of claim 1, wherein the non real-time events are
2 associated with running a Windows operating system.

1 7. The computer system of claim 1, further comprising a radio module including
2 buffered input-output ports coupled to the high-level baseband controller, a
3 low-level baseband controller, and a transceiver to enable wireless
4 communication in accordance with the wireless communication protocol, the
5 module meeting Limited Modular Approval by the Federal Communications
6 Commission.

1 8. The computer system of claim 7, wherein the low-level baseband controller
2 includes a baseband portion associated with a link management protocol.

1 9. The computer system of claim 7, further comprising a flexible cable coupled
2 to the high-level baseband controller at a first end and coupled to the ports of
3 the radio module at a second end.

1 10. The computer system of claim 9, further comprising a hinged lid into which
2 the radio module is affixed, the flexible cable extending through a hinge
3 between the radio module and the high-level baseband controller.

1 11. The computer system of claim 1, further comprising a chipset, the high-level
2 baseband controller being incorporated into the chipset.

1 12. The computer system of claim 1, further comprising a keyboard controller, the
2 high-level baseband controller being incorporated into the keyboard
3 controller.

1 13. The computer system of claim 1, wherein the wireless communication
2 protocol is selected from a group consisting of Bluetooth, SWAP, and IEEE
3 802.11.

1 14. A method comprising:
2 executing a process on a primary host processor of a computer system,
3 the process being associated with a non real-time operating system;
4 receiving a real-time event by a transceiver of the computer system from
5 an external device, the event associated with a wireless
6 communication protocol;
7 forwarding the event to the processor; and

8 processing the event in real-time such that the wireless communication
9 protocol is maintained and a high-level portion of baseband processing
10 associated with the wireless communication protocol is done by the
11 processor independent of the operating system.

1 15. The method of claim 14, wherein a low-level portion of the baseband
2 processing associated with the wireless communication protocol is done by a
3 radio module independent of the processor.

1 16. The method of claim 15, wherein the wireless communication protocol is a
2 Bluetooth protocol, and the low-level portion of the baseband processing is in
3 accordance with the Bluetooth link management protocol.

1 17. The method of claim 14, wherein processing the event in real-time includes
2 halting the process, saving a processor state to a reserved memory space,
3 executing a real-time event handler, returning the processor state, and
4 continuing execution of the process.

1 18. The method of claim 14, wherein processing the event in real-time includes
2 processing the event in a first portion of the processor under a first operating
3 system while continuing execution of the process in a second portion of the
4 processor under a second operating system.

